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Construction and Building Inspectors examine and help regulate the construction or repair of buildings, highways and streets, sewer and waste water systems, dams, bridges, and other structures. Construction and Building Inspectors can specialize variously as building inspectors, electrical inspectors, elevator inspectors, mechanical inspectors, public works inspectors, and home inspectors. The following duties are common to most specialty fields.

Building Inspectors inspect the structural quality and general safety of buildings. They typically inspect the soil condition and position and depth of foundation footings before the construction of a building foundation. Building Inspectors also routinely examine a structure's fire sprinklers, alarms and smoke control systems, and fire exits.

Electrical Inspectors examine the installation of electrical systems and equipment to ensure compliance with electrical codes and standards. Other routine inspections include electrical wiring for heating and air-conditioning systems, appliances, and sound and security systems.

Mechanical Inspectors inspect the installation of the mechanical components of commercial kitchen appliances, heating and air-conditioning equipment, gasoline and butane tanks, gas and oil piping, and gas-fired and oil-fired appliances.

Public Works Inspectors ensure that federal, state, and local government construction projects (i.e., water and sewer systems, highways, streets, and bridges) comply with contract specifications. They inspect excavation and fill operations, the placement of forms for concrete, concrete mixing and pouring, asphalt paving, and grading operations. Public works inspectors can specialize in highways, structural steel, reinforced concrete, or ditches.

Home Inspectors conduct inspections of newly built or previously owned homes. They generally inspect a home's roofing and structural quality as well as the home's plumbing, electrical, and heating and air conditioning systems.

Tasks

- ▶ Use survey instruments, metering devices, tape measures, and test equipment, such as concrete strength measurers, to perform inspections.
- ▶ Inspect bridges, dams, highways, buildings, wiring, plumbing, electrical circuits, sewers, heating systems, and foundations during and after construction for structural quality, general safety and conformance to specifications and codes.

Construction and Building Inspectors

Construction Careers

- ▶ Maintain daily logs and supplement inspection records with photographs.
- ▶ Review and interpret plans, blueprints, site layouts, specifications, and construction methods to ensure compliance to legal requirements and safety regulations.
- ▶ Inspect and monitor construction sites to ensure adherence to safety standards, building codes, and specifications.
- ▶ Measure dimensions and verify level, alignment, and elevation of structures and fixtures to ensure compliance to building plans and codes.
- ▶ Issue violation notices and stop-work orders, conferring with owners, violators, and authorities to explain regulations and recommend rectifications.
- ▶ Issue permits for construction, relocation, demolition, and occupancy.
- ▶ Approve and sign plans that meet required specifications.
- ▶ Compute estimates of work completed or of needed renovations or upgrades, and approve payment for contractors.

Detailed descriptions of this occupation may be found in the Occupational Information Network (O*NET) at online.onetcenter.org.

Important Skills, Knowledge, and Abilities

- ▶ Reading Comprehension — Understanding written sentences and paragraphs in work-related documents.
- ▶ Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- ▶ Mathematics — Using mathematics to solve problems.
- ▶ Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- ▶ Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- ▶ Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- ▶ Public Safety and Security — Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
- ▶ Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- ▶ Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- ▶ Oral Expression — The ability to communicate information and ideas in speaking so others will understand.
- ▶ Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- ▶ Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.

Construction and Building Inspectors

Work Environment

Construction and Building Inspectors have to work in all types of weather and often work alone at building sites. Building sites can be dirty, with tools, building materials, and debris scattered about and underfoot. They walk and move about construction jobs in any stage of completion, climbing ladders, riding on open platform hoists, crawling around in tight spaces, and working many stories above the ground. They also spend time indoors, reviewing blueprints, answering letters or telephone calls, writing reports, and scheduling inspections.

Many Construction and Building Inspectors work for city or county governments and can join government employee unions.

Construction and Building Inspectors normally work 40 hours a week, Monday through Friday. However, they may work additional hours during periods when a lot of construction is taking place. Also, if an accident occurs at a construction site, they must respond immediately and may work additional hours.

California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
Construction and Building Inspectors				
47-4011	11,000	13,800	530	\$23.25 to \$34.98

Wages do not reflect self-employment.

Average annual openings include new jobs plus net replacements.

Source: www.labormarketinfo.edd.ca.gov, Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.

Trends

This occupation will grow at a faster than average rate from 2004 to 2014. This growth will be fueled in large measure by the increased demand for new housing in California. Since Construction and Building Inspectors tend to be older than most workers, a large number are expected to retire during this period, creating additional job openings.

Training/Requirements/Apprenticeships

Construction and Building Inspectors must have knowledge of construction materials and practices. The areas of knowledge may be general, such as structural or heavy construction, or specialized, such as electrical or plumbing systems, reinforced concrete, or structural steel. This knowledge is acquired through years of work experience as a construction contractor, supervisor, or craft worker. Many Construction and Building Inspectors started out as carpenters, electricians, plumbers, or pipefitters. Employers prefer those who have graduated from an apprenticeship program, studied engineering or architecture for at least two years, or have a degree from a community college with courses in construction technology, blueprint reading, mathematics, and building inspection.

Most cities require certification for employment. Even if certification is not needed, inspectors who have a certificate enjoy more employment and advancement opportunities. Certification involves passing difficult tests on code requirements, construction techniques, and materials.

Construction and Building Inspectors

Professional organizations like the Building Officials and Code Administrators International offer voluntary certification.

Recommended High School Course Work

Employers look for Construction and Building Inspector applicants who have at least a high school diploma. High school preparation should include courses in drafting, algebra, geometry, and English.

Where Do I Find the Job?

Direct application to employers remains one of the most effective job search methods. Public sector openings are listed with the personnel/human resource departments of cities and counties. California's State Personnel Board posts job opportunities within state government on their Web site at www.spb.ca.gov.

Use the *Search for Employers by Industry* feature on the *Career Center* page at www.labormarketinfo.edd.ca.gov to locate employers in your area. Search using keywords from the following construction industry names to get a list of private firms and their addresses:

- ▶ Administrative Management Consulting
- ▶ Architectural Services
- ▶ Building Inspection Services
- ▶ Engineering Services
- ▶ Exterminating and Pest Control Services
- ▶ Janitorial Services
- ▶ Landscape Architectural Services
- ▶ Landscaping Services
- ▶ Other Management Consulting Services
- ▶ Other Surveying and Mapping Services
- ▶ Other Technical Consulting Services
- ▶ Testing Laboratories

Search these **yellow page** headings for listings of private firms:

- ▶ Building Code Inspectors
- ▶ Construction Consultants
- ▶ Home Inspectors

Where Can The Job Lead?

Construction and Building Inspectors usually promote to higher level positions, such as Senior Construction and Building Inspector, Principal Construction and Building Inspector, and Chief Construction Building Inspector. Each higher level requires additional knowledge and experience, and usually involves supervisory responsibility. Upper-level inspectors perform the entire range of moderate to difficult inspections of a variety of residences, commercial, and industrial buildings.

Promotions in public agencies depend upon passing a series of written and/or oral civil service examinations for each higher level of the Construction and Building Inspector series.

Other Sources of Information

American Society of Home Inspectors
www.ashi.org

International Code Council
www.iccsafe.org